

**In the Claims:**

Please amend the claims as follows.

1. (Currently Amended) A Process process for producing an absorbent polymer structure (Pa) by treating ~~the an~~ outer portion of an untreated absorbent polymer structure (Pu1), comprising the steps of:

[-] bringing the outer portion of the untreated absorbent polymer structure (Pu1) into contact with an aqueous solution ~~containing~~ comprising at least one chemical cross-linker and at least one inorganic compound in dispersed colloidal form; and

[-] heating the absorbent polymer structure, of which the outer portion has been brought into contact with the aqueous solution, at a temperature in the range from about 40 to about 300°C, so that the outer portion of the absorbent polymer structure is more strongly cross-linked compared to the inner portion and the inorganic compound is at least partly immobilised immobilized in the outer portion of the absorbent polymer structure.

2. (Currently Amended) A process Process for producing an absorbent polymer structure (Pa) by treating the outer portion of an absorbent polymer structure (Pu2), that has not been treated with an inorganic compound in dispersed colloidal form, comprising the steps of:

[-] bringing the outer portion of the absorbent polymer structure (Pu2) into contact with an aqueous solution ~~containing~~ comprising at least one chemical cross-linker and at least one inorganic compound in dispersed colloidal form; and

[-] heating the absorbent polymer structure, of which the outer portion has been brought into contact with the aqueous solution, at a temperature in the range from about 40 to about 300°C, so that the outer portion of the absorbent polymer structure is more strongly cross-linked compared to the inner portion and the in-

organic compound is at least partly immobilised immobilized in the outer portion of the absorbent polymer structure.

3. (Currently Amended) The process Process according to claim 1 or claim 2, wherein the absorbent polymer structure (Pu1) or (Pu2) is based on:

- (α1) about 20[-] to about 99.999 wt.% of polymerized polymerised, ethylenically unsaturated, acidic group-containing monomers or salts thereof or polymerized polymerised, ethylenically unsaturated monomers containing a protonated or a quaternary nitrogen, or mixtures thereof,
- (α2) 0 [-] to about 80 wt.% of polymerized polymerised, monoethylenically unsaturated monomers which can be co-polymerized co-polymerised with (α1),
- (α3) about 0.001[-] to about 5 wt.% of one or more cross-linkers,
- (α4) 0 [-] to about 30 wt.% of a water soluble polymer, as well as
- (α5) 0 [-] to about 20 wt.% of one or more additives,

wherein the sum of the component weights (α1) to (α5) amounts to 100 wt.%.

4. (Currently Amended) The process Process according to claim 1 one of the preceding claims, wherein the absorbent polymer structure (Pu1) or (Pu2) has comprises at least one of the following properties:

- (A) the maximum absorption of 0.9 wt.% NaCl solution is within a range from at least about 10 to about 1000 g/g.
- (B) the part extractable with 0.9 wt.% aqueous NaCl solution amounts to less than about 30 wt.%, based on the absorbent polymer structure (Pu1) or (Pu2),

- (C) the bulk density is within a range from about 300 to about 1000 g/l,
- (D) the pH value for 1 g of the absorbent polymer structure (Pu1) or (Pu2) in 1 l water is within a range from about 4 to about 10,
- (E) the CRC value is within a range from about 10 to about 100 g/g.

5. (Currently Amended) The process Process according to claim 1 one of the preceding claims, wherein the absorbent polymer structure (Pu1) or (Pu2) is brought into contact with at most about 20 wt.% of the aqueous solution, based on the weight of the absorbent polymer structure (Pu1) or (Pu2).

6. (Currently Amended) The process Process according to claim 1 one of the preceding claims, wherein two separate aqueous solutions, of which one contains the chemical cross-linker and the other the inorganic compound in dispersed colloidal form, are brought simultaneously into contact with the absorbent polymer structure (Pu1) or (Pu2).

7. (Currently Amended) The process Process according to claim 1 one of the preceding claims, wherein at least about 30 wt.% of the inorganic compound in the aqueous solution, with which the outer portion of the absorbent polymer structure (Pu1) or (Pu2) is brought into contact, comprises particles with a particle size within a range from about 1 to about 100 nm.

8. (Currently Amended) The process Process according to claim 1 one of the preceding claims wherein the inorganic compound is used in an amount from about 0.001 to about 10 wt.% based on the absorbent polymer structure (Pu1) or (Pu2), in the treatment of the outer portion of an absorbent polymer structure (Pu1) or (Pu2).

9. (Currently Amended) The process Process according to claim 1 one of the preceding claims, wherein particles comprising polysilicic acid are used as inorganic compound.

10. (Currently Amended) The process Process according to claim 1 one of the preceding claims, wherein a condensation cross-linker is used as the chemical cross-linker.

11. (Cancelled)

12. (Currently Amended) An absorbent Absorbent polymer structure (Pa), comprising an inner portion as well as an outer portion surrounding the inner portion, wherein the outer portion is more strongly cross-linked than the inner portion, an inorganic compound is at least partly immobilized immobilised in the outer portion and wherein the absorbent polymer structure (Pa) has at least one of the following properties:

- (β1) for a CRC [<] of about 26 g/g or less, a SFC of at least about  $80 \cdot 10^{-7}$  cm<sup>3</sup>·s·g<sup>-1</sup>,
- (β2) for a CRC within the range [≥] more than 26 to about [<] 27 g/g or less, a SFC of at least about  $70 \cdot 10^{-7}$  cm<sup>3</sup>·s·g<sup>-1</sup>,
- (β3) for a CRC within the range [≥] more than 27 to [<] less than about 28 g/g a SFC of at least about  $60 \cdot 10^{-7}$  cm<sup>3</sup>·s·g<sup>-1</sup>,
- (β4) for a CRC within the range [≥] more than 28 to [<] less than about 29 g/g a SFC of at least about  $45 \cdot 10^{-7}$  cm<sup>3</sup>·s·g<sup>-1</sup>,
- (β5) for a CRC within the range [≥] more than 29 to [<] less than about 30 g/g a SFC of at least about  $30 \cdot 10^{-7}$  cm<sup>3</sup>·s·g<sup>-1</sup>,
- (β6) for a CRC within the range [≥] more than 30 to [<] less than about 31 g/g a SFC of at least about  $20 \cdot 10^{-7}$  cm<sup>3</sup>·s·g<sup>-1</sup>,

(β7) for a CRC within the range [≥] more than 31 g/g a SFC of at least about  $10 \cdot 10^{-7} \text{ cm}^3 \cdot \text{s} \cdot \text{g}^{-1}$ .

13. (Currently Amended) An absorbent Absorbent polymer structure (Pa) according to claim 12, wherein the absorbent polymer structure has an Absorbency against Pressure (AAP) of at least about 18 g/g under a pressure of about 50 g/cm<sup>2</sup>.
14. (Currently Amended) An absorbent Absorbent polymer structure (Pa) according to claim 12 one of claims 12 to 13, wherein the inorganic compound is a condensate of polysilicic acids.
15. (Currently Amended) A composite Composite, comprising an absorbent polymer structure (Pa) according to claim 11 or 12 and a substrate.
16. (Currently Amended) A process Process for producing a composite, wherein an absorbent polymer structure (Pa) according to claim 11 or 12 and a substrate and optionally an additive are brought into contact with each other.
17. (Currently Amended) A composite Composite obtainable by a process according to claim 16.
18. (Currently Amended) Chemical products, comprising the absorbent polymer structure (Pa) according to claim 11 or 12 or the composite according to claim 15 or 17.

19. (Currently Amended) Use of the absorbent polymer structure (Pa) according to claim 11 or 12 or of the composite according to claim 15 or 17 in chemical products.

20. (Currently Amended) An aqueous Aqueous solution containing at least one chemical cross-linker and at least one inorganic compound in dispersed colloidal form.

21. (Currently Amended) A process Process for producing an aqueous solution according to claim 20, wherein an aqueous solution containing at least one inorganic compound in dispersed colloidal form is mixed with at least one chemical cross-linker.

22. (Currently Amended) A process Process according to claim 21, wherein the chemical cross-linker is used in the form of an aqueous solution.

23. (Currently Amended) An aqueous solution obtainable by a process according to claim 21 or 22.

24. (Currently Amended) An aqueous solution according to claim 20 or 23, wherein the inorganic compound is in the form of particles comprising polysilicic acid.

25. (Currently Amended) Use of the aqueous solution according to claim 20 or 23 in the treatment of the outer portion of an untreated absorbent polymer structure (Pu1).

26. (Currently Amended) Use of the aqueous solution according to claim 20 or 23 in the treatment of the outer portion of an absorbent polymer structure (Pu2), that has not been treated with an inorganic compound in dispersed colloidal form.

27. (Currently Amended) Use of the aqueous solution according to claim 20 or 23 in the tuning of at least one of the following properties of an untreated absorbent polymer structure (Pu1):

- (γ1) Saline Flow Conductivity (SFC),
- (γ2) Centrifugation Retention Capacity (CRC) or
- (γ3) Absorbency against Pressure (AAP).

28. (Currently Amended) Use of the aqueous solution according to claim 20 or 23 in the tuning of at least one of the following properties of an absorbent polymer structure (Pu2), that has not been treated with an inorganic compound in dispersed colloidal form:

- (γ1) Saline Flow Conductivity (SFC),
- (γ2) Centrifugation Retention Capacity (CRC) or
- (γ3) Absorbency against Pressure (AAP).